

LISTING OF THE CLAIMS

A complete listing of the claims is provided below. This listing of claims will replace all prior versions and listings of claims in the application.

1. (Cancelled)

2. (Currently Amended) A device that provides diagnostic and control capability for equipment from a remote location comprising:

an apparatus detached from the equipment comprising a display device, an input device, software executed by the apparatus and a communications device; and

a hardware controller attached to the equipment to enable monitoring of the equipment by the apparatus through the communications device[.]; and

a second hardware controller attached to a second equipment to enable monitoring of the second equipment through the communication device.

wherein a unique identifier is stored on an embedded memory of the hardware controller, ~~wherein~~ the unique identifier is compiled using parts of data accommodating decoding specific manufacturing configurations of the equipment, the embedded memory including a database of ~~alarm conditions operating state~~ of the equipment ~~and the environmental conditions of the equipment~~, readable by the apparatus detached from the equipment, ~~the embedded memory including embedded random access memory and embedded electrically erasable programmable read-only memory upon which read and write commands are executed~~ the specific manufacturing configurations of the equipment includes specific mechanical components of the equipment, and further including the second equipment with a second unique identifier, the second equipment with the second hardware controller being networked with the equipment and the apparatus, the second controller accommodating a reading and writing of the unique identifier information by the apparatus.

3. (Previously Presented) The device as in claim 2, wherein the controller is queried by the apparatus, and wherein information in the unique identifier accommodating diagnosing and servicing of the equipment.

4. (Previously Presented) The device as in claim 2, wherein the controller transmits data to the apparatus without being queried, and wherein the hardware controller being embedded in the equipment, and the unique identifier comprising manufactured date of the equipment, shipment date of the equipment, device brand of the equipment, device feature set of the equipment; device type of the equipment, and operating limits of the equipment.

5. (Previously Presented) The device of claim 4, wherein the data being transmitted is an indication detected by the controller of an equipment problem.

6. (Currently Amended) The device as in claim 3, wherein the controller transmits data in response to the query, the embedded memory including a database of alarm conditions of the equipment and the environmental conditions of the equipment, readable by the apparatus detached from the equipment, the embedded memory including embedded random access memory and embedded electrically erasable programmable read-only memory upon which read and write commands are executed.

7. (Previously Presented) The device as in claim 3, wherein the controller is instructed by the software code to gather specific data about the equipment and transmitted to the apparatus.

8. (Previously Presented) The device in claim 7, wherein the data is compiled by the software in a user preferred manner.

9. (Previously Presented) The device of claim 7, wherein the data is collected for a specific period of time after which time the data is lost and a new data collection period begins.

10. (Previously Presented) The device of claim 9, wherein the data is available for review by a user on the apparatus during the specific period of time.

11. (Previously Presented) The device of claim 2, wherein the software code is programmed with acceptable operational limits for the equipment associated with the identifier, evaluating certain bits of data on the unique identifier and comparing the unique identifier to acceptable operational limits for the equipment.

12. (Previously Presented) The device of claim 11, wherein the limits are compared to the data retrieved from said controller, if results are within the acceptable operational limits the data no further action is taken, if results are not within acceptable said limits then apparatus carries out a predefined task.

13. (Previously Presented) The device of claim 12, wherein the predetermined task is alerting the user as to the condition.

14. (Previously Presented) The device of claim 12, wherein the predetermined task is alerting a technician as to the performance of the equipment.

15. (Previously Presented) The device of claim 12, wherein the predetermined task is transmitting data to the equipment to adjust certain operational features of the equipment, a set-point view allowing remote selection of control parameters for the equipment, the differentiation of the equipment types, and feature sets being determined by decoding the unique identifier of the corresponding equipment, wherein the feature sets includes a current temperature scan, alarm scan of certain failure events of the corresponding equipment, scanning all equipment with historic logging, supervisory utilities, cumulative on-time, excursions, manufactured date, shipped date, and force delog.

16. (Previously Presented) The device of claim 7, wherein the data is recorded and stored and available for review by the user.

17. (Cancelled)

18. (Currently Amended) A method that provides remote diagnostic and control capability for equipment comprising:

monitoring the equipment through a hardware controller attached the equipment with a remote apparatus comprised of an input device, display device, a communications device and software code executed by the apparatus; and

storing a unique identifier on a memory of the controller that is attached to the equipment, the unique identifier is assembled using an array of data wherein specific manufacturing aspects of the equipment are compiled within the unique identifier using the array of data allowing decoding of the manufacturing aspects of the equipment, with ~~the last~~ certain bits of data of the unique identifier being evaluated to determine whether the equipment is within acceptable limits of operation for the equipment, the specific manufacturing configurations of the equipment comprises specific mechanical components of the equipment.

storing the operating state of the equipment on the memory of the controller;
storing a second unique identifier on a second equipment, the second equipment with a
second controller being networked with the equipment and the apparatus, the second controller
accommodating a reading and writing of the unique identifier information by the apparatus; and
diagnosing and controlling the equipment and the second equipment according to both
the unique identifier and monitored operating state of the equipment and second equipment.

19. (Previously Presented) The method of claim 18, further comprising:

selecting with the software code specific data collection wherein the software code records the data of pre-selected features of the equipment; and

setting the local network address of the hardware controller for the remote apparatus, the preprogrammed unique identifier being sent and compared, when a match occurs, a net address field of the unique identifier being defined as the local network address for the hardware controller.

20. (Previously Presented) The method of claim 18, further comprising:

querying the controller with request for data, wherein the data is transmitted to the apparatus; and

when in communication fault, the equipment enters a communication recovery mode at a certain interval, the command query requests the unique identifier for the equipment issued by the remote apparatus, and when correct response is received, the remote apparatus restoring the equipment on a network and update the output.

21. (Previously Presented) The method of claim 20, further comprising responding and transmitting a response to the query, evaluating certain bits of data on the unique identifier and

comparing the unique identifier to acceptable operational limits for the equipment to accommodate diagnosing the equipment.

22. (Previously Presented) The method of claim 21, further comprising compiling of the data by the apparatus and stored for a period of time.

23. (Previously Presented) The method of claim 22, wherein data collection is gathered for a fixed period of time after which the data is removed and a new data period is commenced.

24. (Previously Presented) The method of claim 22, wherein the data is recorded and stored and available for review.

25. (Previously Presented) The method of claim 22, further comprising comparing the data received from the controller with pre-selected limits, if the results of the comparison are outside of the acceptable limits then the apparatus proceeds with a predefined action; if the results of the comparison are with the acceptable limits then no further action is taken.

26. (Previously Presented) The method of claim 25, wherein the predefined action is alerting an individual.

27. (Previously Presented) The method of claim 25, wherein the predefined action is alerting a technician as to the performance of the equipment.

28. (Previously Presented) The method of claim 25, wherein the predefined action is transmitting data to the equipment to adjust certain features of the equipment, for every outbound message to the controller, a known response being expected from a controller, characteristics of

the expected response being defined, and embedded controller within the equipment issuing a redundancy check failure error message.

29. (Previously Presented) The method of claim 26, wherein alerting an individual is accomplished by sending a message.

30. (Previously Presented) The method of claim 29, wherein the predefined action is playing a prerecorded message.

31. (Cancelled)

32. (Currently Amended) A device that provides remote diagnostic and control capability for equipment comprising:

remote means for monitoring the equipment, the means for monitoring is an apparatus that is comprised of an input device, display device, a communications device and software coded executed by the apparatus;

means for determining the status of the equipment through the means for monitoring, wherein the means for determining is a hardware device and is attached to the equipment and contains a unique identifier in an embedded memory, the unique identifier is assembled using an array of data wherein manufacturing aspects of the equipment are compiled within the unique identifier, ~~the embedded memory including a database of alarm conditions of the equipment and the environmental conditions of the equipment, readable by the apparatus detached from the equipment~~ the specific manufacturing configurations of the equipment includes specific mechanical components of the equipment; and

a second equipment with a second unique identifier, the second equipment with a second controller being networked with the equipment and the apparatus, the second controller accommodating a reading and writing of the unique identifier information by the apparatus.

33. (Previously Presented) The device of claim 32, wherein the means for determining is a hardware controller.

34. (Previously Presented) The device of claim 32, further comprising:

a means for selecting with software code specific data collection wherein the software code records the data of pre-selected features of the equipment, and

a means for a set-point view allowing remote selection of control parameters for the equipment, the differentiation of the equipment types, and feature sets being determined by decoding the unique identifier of the corresponding equipment, wherein the feature sets includes a current temperature scan, alarm scan of certain failure events of the corresponding equipment, scanning all equipment with historic logging, supervisory utilities, cumulative on-time, excursions, manufactured date, shipped date, and force delog.

35. (Previously Presented) The device of claim 33, further comprising means for compiling the data from the equipment by querying the controller with request for data.

36. (Previously Presented) The device of claim 35, wherein data collection is gathered for a fixed period of time after which the data is removed and a new data period is commenced.

37. (Previously Presented) The device of claim 35, wherein the data is recorded and stored and available for review.

38. (Previously Presented) The device of claim 35, further comprising means for comparing the data received from the controller with pre-selected limits, if the results of the comparison are outside of the acceptable limits then the apparatus proceeds with a predefined action, if the results of the comparison are within the acceptable limits then no further action is taken.

39. (Previously Presented) The device of claim 38, wherein the predefined action is alerting an individual.

40. (Cancelled)

41. (Previously Presented) The device of claim 38, wherein the predefined action is transmitting data to the equipment to adjust certain features of the equipment.

42. (Previously Presented) The device of claim 39, wherein alerting an individual is accomplished by sending a message.

43. (Previously Presented) The device of claim 42, wherein the predefined action is playing a prerecorded message.

44. (Previously Presented) The device as in claim 2, wherein the specific manufacturing configurations of the equipment comprises a manufacturer of the equipment.

45. (Previously Presented) The device as in claim 2, wherein the specific manufacturing configurations of the equipment comprises operating limits.

46. (Previously Presented) The device as in claim 2, wherein the specific manufacturing configurations of the equipment comprises manufacturer's serial number.

47. (Previously Presented) The device as in claim 2, wherein the specific manufacturing configurations of the equipment comprises a feature set of the equipment.

48. (Currently Amended) A device that provides diagnostic and control capability for equipment from a remote location comprising:

an apparatus detached from the equipment comprising a display device, an input device, software executed by the apparatus and a communications device; and

a hardware controller attached to the equipment to enable monitoring of the equipment by the apparatus through the communications device, wherein a unique identifier is stored on an embedded memory of the controller, wherein the unique identifier is compiled using parts of data accommodating decoding specific manufacturing configurations of the equipment, the embedded memory including a database of alarm conditions of the equipment and the environmental conditions of the equipment, readable by the apparatus detached from the equipment, the embedded memory including embedded random access memory and embedded electrically erasable programmable read-only memory upon which read and write commands are executed.

~~The device as in claim 2,~~ wherein the specific manufacturing configurations of the equipment comprises specific mechanical components of the equipment, and further comprising a second equipment with a second unique identifier, the second equipment with a second controller being networked with the equipment and the apparatus, the second controller accommodating a reading and writing of the unique identifier information by the apparatus .

49. (New) A system that provides diagnostic and control capability for an ultra-low temperature freezer equipment from a remote location comprising:

a first device detached from the equipment comprising a display device, an input device, software executed by the apparatus and a communications device; and

a hardware controller attached to the equipment to enable monitoring of the ultra-low temperature equipment by the first device through the communications device including the environmental conditions of the ultra-low temperature freezer equipment, readable by the apparatus detached from the equipment, a unique identifier and monitored operating state of the equipment stored on a memory of the hardware controller accommodating monitoring and control of the ultra-low temperature freezer.

50. (New) The system as in claim 49, further comprising:

a unique identifier is stored on an embedded memory of the controller accommodating diagnosing of the ultra-low temperature freezer equipment, the unique identifier is compiled using parts of data accommodating decoding specific manufacturing configurations of the equipment, the embedded memory including a database of alarm conditions of the equipment and the environmental conditions of the equipment, readable by the first device detached from the equipment, the specific manufacturing configurations of the ultra-low temperature equipment comprises specific mechanical components of the equipment; and

a second equipment with a second unique identifier, the second equipment with a second controller being networked with the equipment and the apparatus, the second controller accommodating a reading and writing of the unique identifier information by the first device.

51. (New) A system of providing diagnostic and control capability for freezer equipment from a remote location comprising:

an apparatus detached from the equipment comprising a display device, an input device, software executed by the apparatus and a communications device; and

a hardware controller attached to the equipment to enable monitoring of the equipment by the apparatus through the communications device, wherein a unique identifier is stored on an embedded memory of the controller, wherein the unique identifier is compiled using parts of data accommodating decoding specific manufacturing configurations of the equipment, the embedded memory including a database of alarm conditions of the equipment and the environmental conditions of the equipment, readable by the apparatus detached from the equipment.

52. (New) The device as in claim 51, wherein the specific manufacturing configurations of the equipment comprises specific mechanical components of the equipment, and further comprising a second equipment with a second unique identifier, the second equipment with a second controller being networked with the equipment and the apparatus, the second controller accommodating a reading and writing of the unique identifier information by the apparatus .

53. (New) The device of claim 2, wherein the unique identifier with the operating state accommodates diagnosing and control of the equipment and second equipment by the apparatus.